

## ELECTRICAL POWER GENERATION SYSTEM AND METHOD

### ABSTRACT OF THE DISCLOSURE

5           An electrical power generating system and method wherein a generator is driven  
by an air-breathing engine. At any operating condition, for a given power output the  
engine efficiency is substantially optimized by controlling the rate of air flow through the  
engine in such a manner that the fuel/air ratio is controlled to maintain a high peak  
temperature imparted to the working fluid in the engine. The method and system of the  
10 invention eliminate the need for variable-geometry mechanisms in the engine, and also  
eliminate the need for variable-geometry combustors and pre-burners. The invention is  
applicable to various types of air-breathing engines that operate at low fuel/air ratios.